

Academic Press Dictionary of Science and Technology

Edited by
Christopher Morris



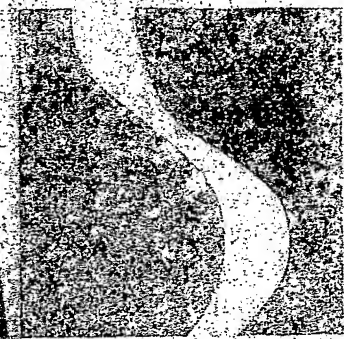
Academic Press

Harcourt Brace Jovanovich, Publishers

San Diego New York Boston London Sydney Tokyo Toronto

BEST AVAILABLE COPY

Academic Press Dictionary of Science and Technology



This book is printed on acid-free paper. ©

Copyright © 1992 by ACADEMIC PRESS, INC.
All Rights Reserved.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

Academic Press, Inc.
1250 Sixth Avenue, San Diego, California 92101-4311

United Kingdom Edition published by
Academic Press Limited
24-28 Oval Road, London NW1 7DX

Library of Congress Cataloging-in-Publication Data

Academic Press dictionary of science and technology / edited by
Christopher Morris.

p. cm.

ISBN 0-12-200400-0

1. Science--Dictionaries. 2. Technology--Dictionaries.

I. Morris, Christopher G. II. Academic Press. III. Title:

Dictionary of science and technology.

Q123.A33 1991

503--dc20

90-29032

PRINTED IN THE UNITED STATES OF AMERICA

92-93-94-95-96-97-DO-9-8-7-6-5-4-3-2-1

BEST AVAILABLE COPY

epitaxy *Crystallography*. the oriented overgrowth of one crystalline material upon the surface of another. There is often an approximate agreement in lattice spacings in the two components. Thus, epitaxial. Also, epitaxial.

epithalamus *Anatomy*. a portion of the diencephalon that contains the genicular nuclei, the stria media, and the pineal body.

epitheca *Invertebrate Zoology*. 1. an external calcareous layer around the basal portion of the theca of many corals. 2. the outer or upper valve of a diatom cell wall.

epithelium *Mycology*. in fungi, a layer of tissue over the spore sacs.

epithelia *Histology*. the plural form of *epithelium*.

epithelial [ep'ə the'lē əl] *Histology*. of, relating to, or composed of epithelium or epithelial cells.

epithelial cells *Cell Biology*. cells that form the barrier between an organism and its external environment. These cells either may be involved in the secretion or uptake of liquids or nutrients, or may perform a simple barrier function.

epithelialization *Surgery*. the process of healing by the growth of epithelial cells over an area. Also, epithelization.

epitheliochorial placenta *Developmental Biology*. a placenta in which the uterine epithelial lining has not eroded but simply lies in apposition to the chorion.

epithelioid cell *Histology*. a macrophage that superficially resembles an epithelial cell.

epithelioma [ep'ə the'lē ō'mə] *Medicine*. 1. a tumor, either benign or malignant, derived from epithelium. 2. in popular use, a skin cancer.

epitheliomuscular cell *Invertebrate Zoology*. a cell with an elongated base that contains contractile fibrils, common in the epidermis of many invertebrates and nematodes. Also, MUSCULO-EPITHELIUM.

epithelium [ep'ə the'lē əm] *Histology*. an animal tissue composed of cells that are packed tightly together, with little intercellular matrix; it covers the external surface of the body and also internal surfaces such as the lining of tracts and vessels.



frog epithelium

epithema *Vertebrate Zoology*. a horny excrescence on the bill of some birds, as in the casque of a hornbill.

epithemiaceae *Botany*. a small family of freshwater, brackish, and terrestrial diatoms of the order Pennales, characterized by an asymmetrical apical axis and strongly developed transverse internal costae.

epithermal *Thermodynamics*. slightly above a given thermal range.

epithermal deposit *Geology*. a hydrothermal mineral deposit formed by deposition from ascending hot solutions (at temperatures between 300°C and 200°C) in and along openings in rocks within 3000 feet of the earth's surface. Similarly, epithermal vein.

epithermal neutron *Nuclear Physics*. a neutron that has an energy level just above the thermal range, between about .02 and 100 electronvolts.

epithermal reactor *Nuclear Physics*. a reactor in which a significant fraction of fissions are caused by epithermal neutrons.

epithermal thorium reactor *Nuclear Physics*. a nuclear reactor in which epithermal neutrons, moderated by graphite or beryllium, unleash the energy contained in a uranium-thorium fuel mixture.

epithet *Systematics*. the second word in a binomen, or the second and third words in a trinomen, that identify a species or subspecies within a genus; in binomial nomenclature the epithet usually begins with a lowercase letter and is italicized.

Epithyris *Paleontology*. an extinct genus of articulate brachiopods in the order Terebratulida, widespread in the Jurassic.

epitoke *Invertebrate Zoology*. the rear portion of a marine polychaete worm in its reproductive state, swollen with eggs or sperm.

epitoky *Invertebrate Zoology*. the process by which marine polychaete worms become reproductive, shown by a seasonal modification in their gamete-bearing segments differing markedly from the usual nonsexual form.

epitonic *Neurology*. exhibiting an abnormally high degree of muscular tension or tone; tense.

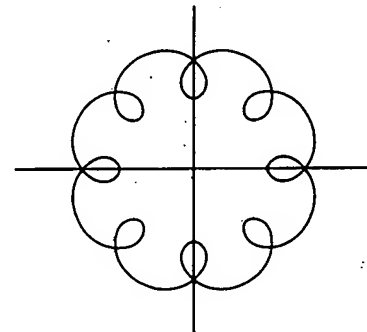
epitope *Immunology*. the area of an antigenic molecule that determines the specific antibody to which the antigen binds.

epitryptic behavior *Behavior*. behavior toward another animal of the same species that tends to cause that animal to approach.

epitrichium *Developmental Biology*. the large-celled outer layer of the bilaminar fetal epidermis of mammals. Also, PERIDERM.

epitrochlear *Anatomy*. of or relating to the medial condyle of the humerus.

epitrochoid *Mathematics*. a generalization of an epicycloid in which the tracing point may be fixed anywhere on the radius of the rolling circle or its extension instead of exactly on the circumference.



epitrochoid

epituberculosis *Medicine*. a prominent pulmonary shadow seen in X-ray films in active juvenile tuberculosis.

epitympanum *Anatomy*. the area of the middle ear above the level of the tympanic membrane that contains the head of the malleus and the body of the incus.

epitype *Immunology*. a family composed of epitopes having similar restrictive determinants.

epivalve *Invertebrate Zoology*. 1. the upper or apical shell of certain dinoflagellates. 2. the upper valve (epitheca) of a diatom.

epixylous *Ecology*. of or relating to an organism that grows on wood. Also, epixylic.

epizone *Geology*. in Grubenmann's classification of metamorphic rocks, the uppermost depth zone of metamorphism, characterized by moderate temperatures, low hydrostatic pressure, and powerful stress.

epizootic *Veterinary Medicine*. of or relating to a rapidly spreading disease affecting a large number of animals throughout a wide area; corresponds to the term epidemic in human medicine.

epizootic lymphangitis *Veterinary Medicine*. a chronic contagious disease of the family Equidae, also sometimes occurring in cattle but rarely in humans; characterized by thickening of a lymphatic vessel, swelling of the lymph nodes, ulcers of the mucous membranes of the nose and vulva or scrotum, and pneumonia; caused by *Histoplasma farciminosum*, which is transmitted by flies or discharges of diseased animals and enters the animal through a wound. Also, AFRICAN GLANDERS; LYMPHANGITIS EPIZOOTICA.

epizootology *Veterinary Medicine*. a science that deals with the frequency, distribution, cause, and control of disease in animals.

E-plane antenna *Electromagnetism*. an antenna whose radiated electric field lies in a plane parallel to the plane of the antenna.

E-plane T-junction *Electromagnetism*. a waveguide T-junction whose structure changes in the plane of the electric field. Also, SERIES T-JUNCTION.

epoch *Geology*. a unit of geologic time, longer than an age and representing a subdivision of a period during which the rocks of a particular series were formed. *Physics*. the initial set of conditions of a system, such as the initial phase angle of a simple harmonic oscillator.